

TEMPERATURE OF TRANSFORMATION ( $^{\circ}\text{C}$ )

AUSTENITE (STABLE)

TRANSFORMATION BEGINS

PEARLITE-FERRITE TRANSFORMATION ENDS

BAINITE

AUSTENITE (UNSTABLE)

MARTENSITE

50% MARTENSITE

90% MARTENSITE

1A

$M_s$

$Ae_1$

1 MINUTE

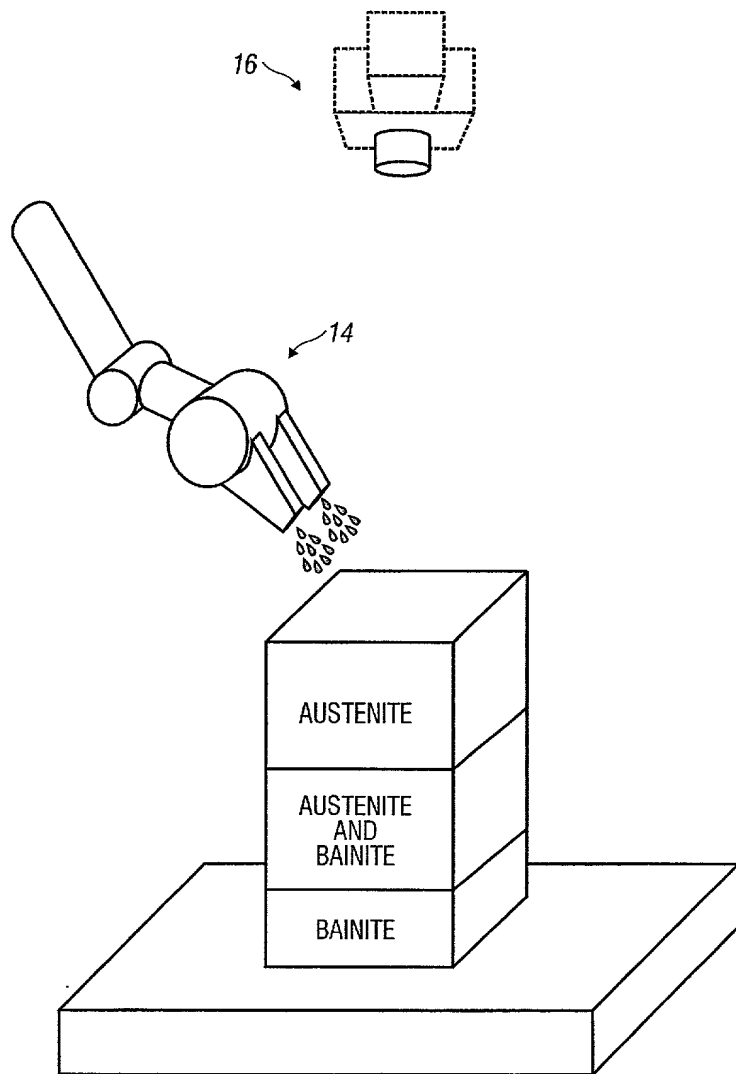
1 HOUR

1 DAY

1 WEEK

TRANSFORMATION TIME (s) (LOG. SCALE)

**FIG. 1**

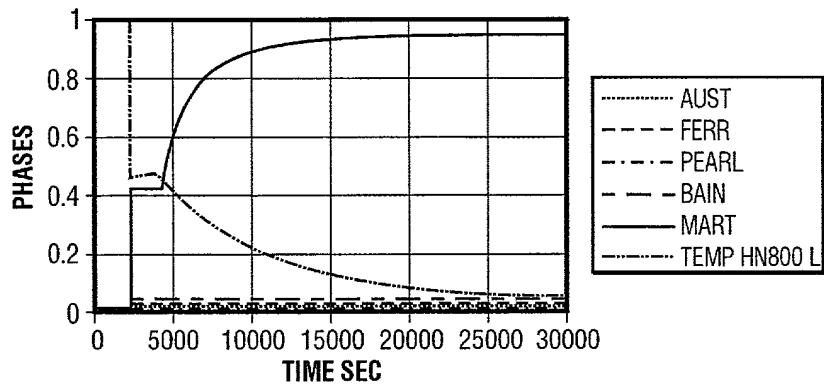


**FIG. 1A**

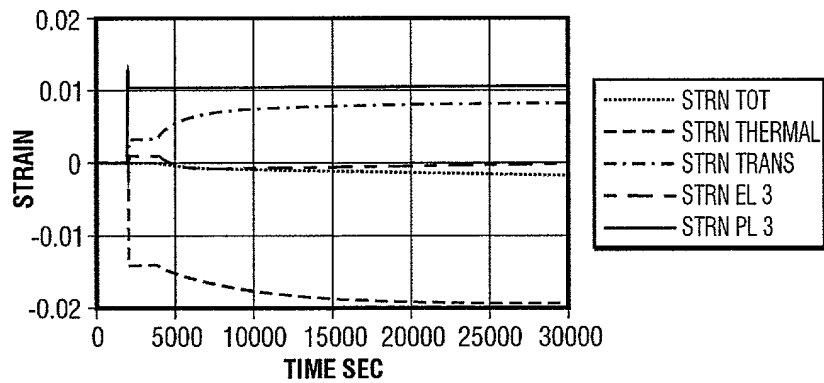
Figure 10 is a line graph showing Temperature (Y-axis, 0 to 700) versus Time SEC (X-axis, 0 to 30000). The graph displays the cooling curves for the 1: INTERFACE, 5, 10, 15, and 20: TOP regions. The 1: INTERFACE curve (dotted line) shows the highest temperature, peaking at approximately 650°C around 2500 seconds. The 20: TOP curve (solid line) shows the lowest temperature, peaking at approximately 380°C around 2500 seconds. All curves show a rapid initial rise followed by a gradual decline.

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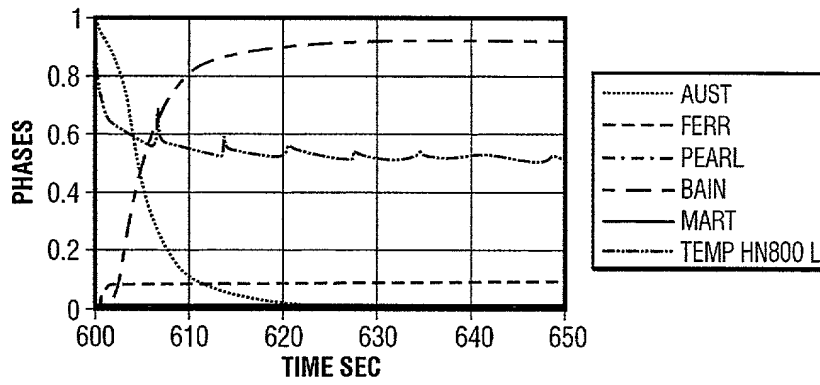


*Phases, Position #10*  
**FIG. 4**

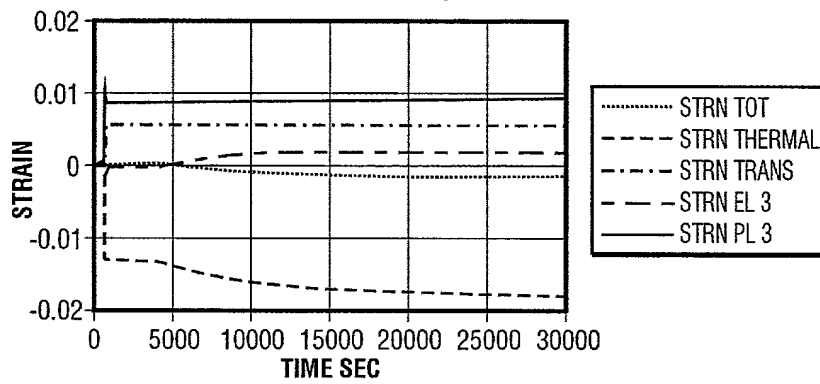


*In-Plane Strains, Position #10*  
**FIG. 5**

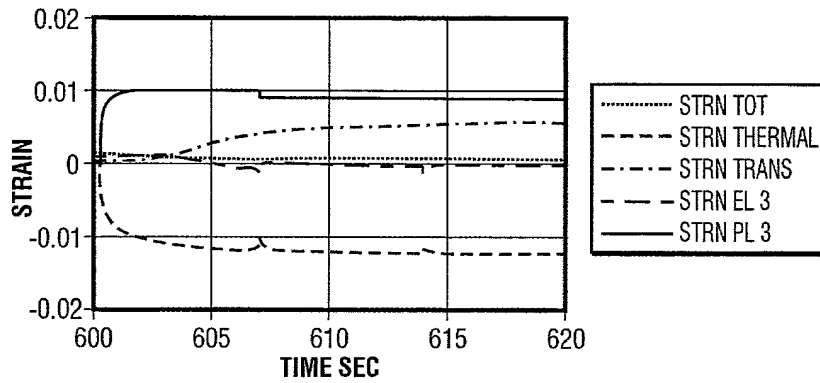
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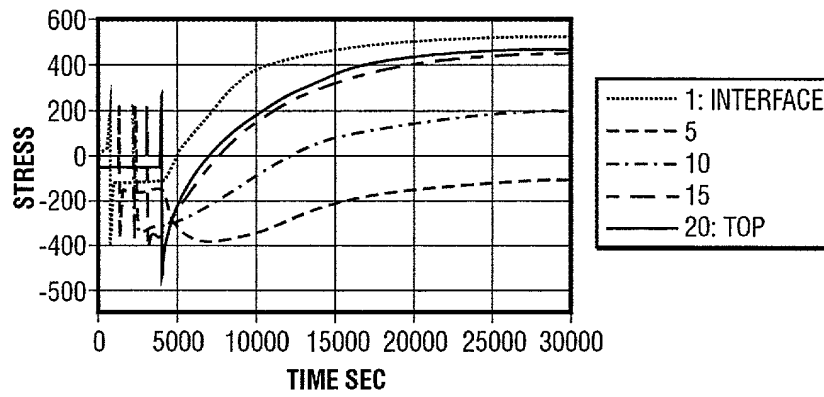
*Phases, Position #1*  
**FIG. 8**



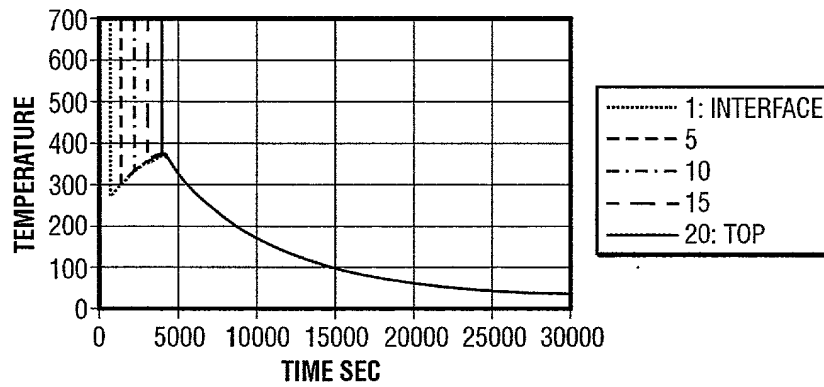
*In-Plane Strains, Position #1*  
**FIG. 9**



*In-Plane Strains, Position #1*  
**FIG. 10**

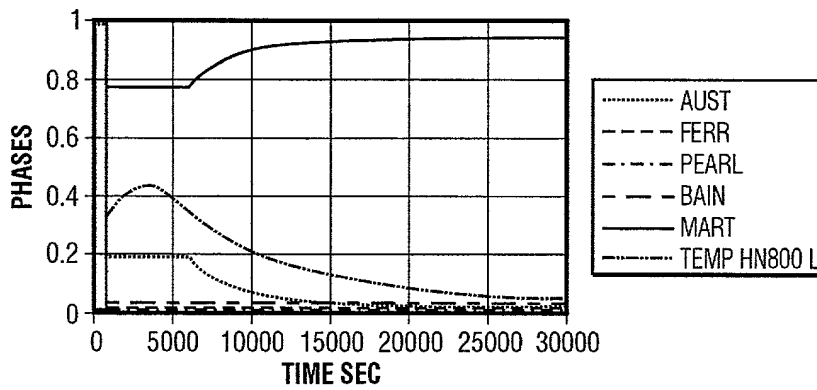


*In-Plane Stress*  
**FIG. 11**

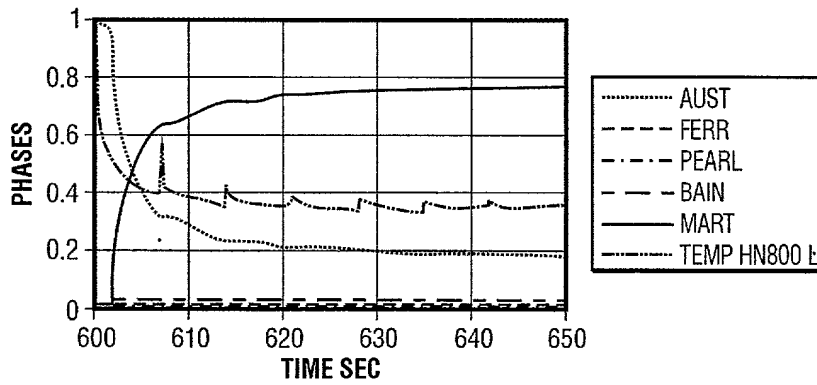


*Temperature*  
**FIG. 12**

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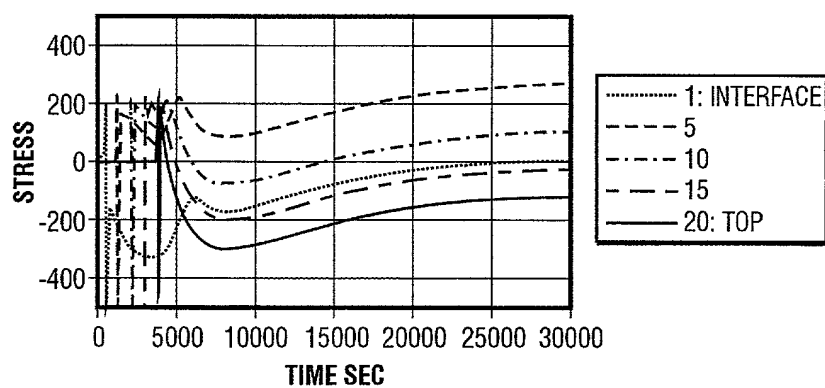


*Phases, Position #1*  
**FIG. 13**

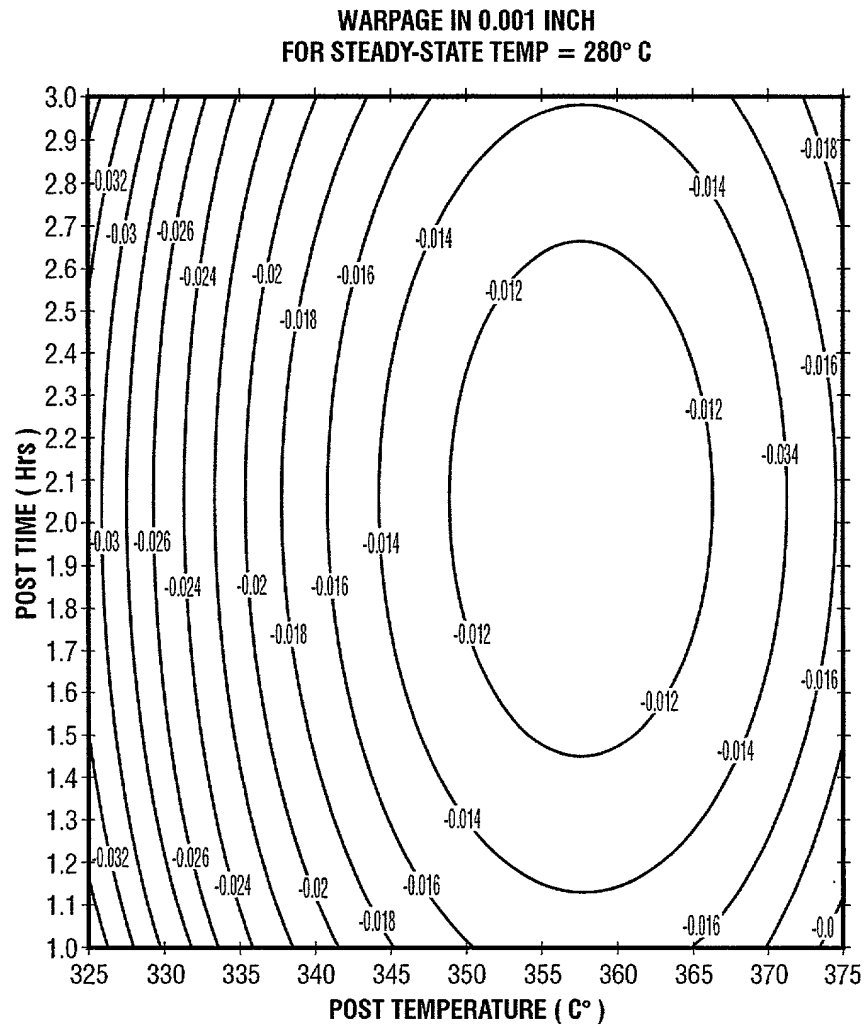


*Phases, Position #1*  
**FIG. 14**

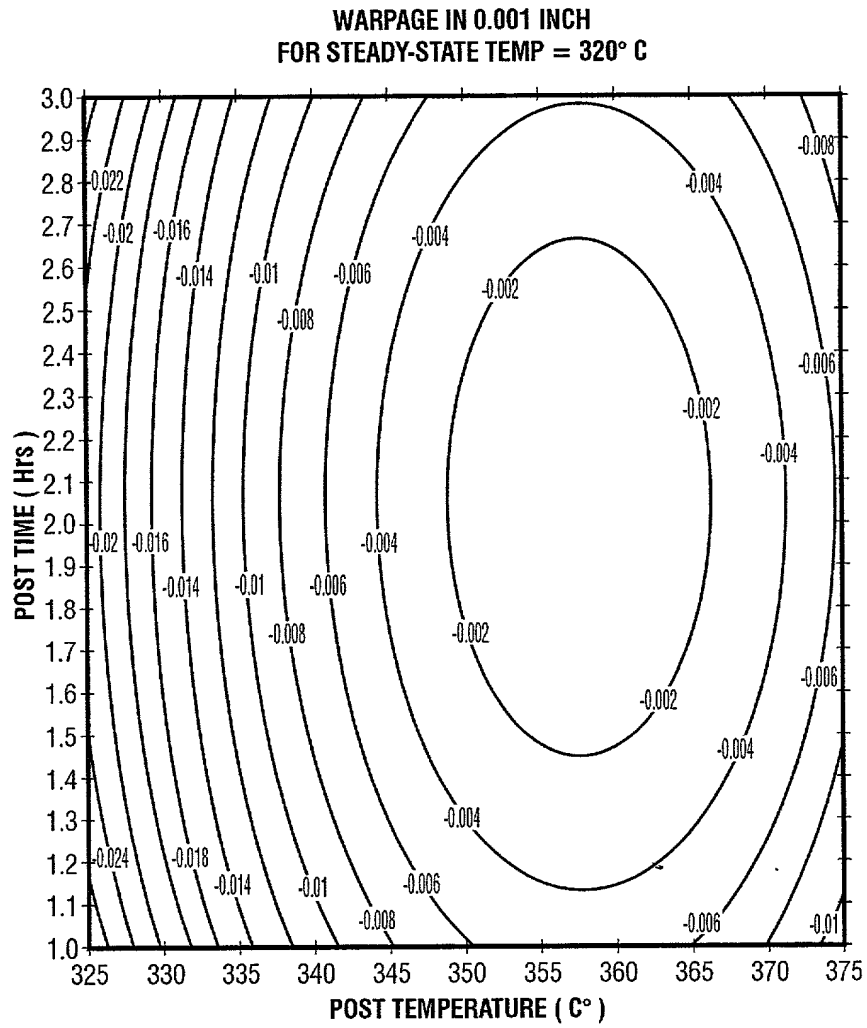




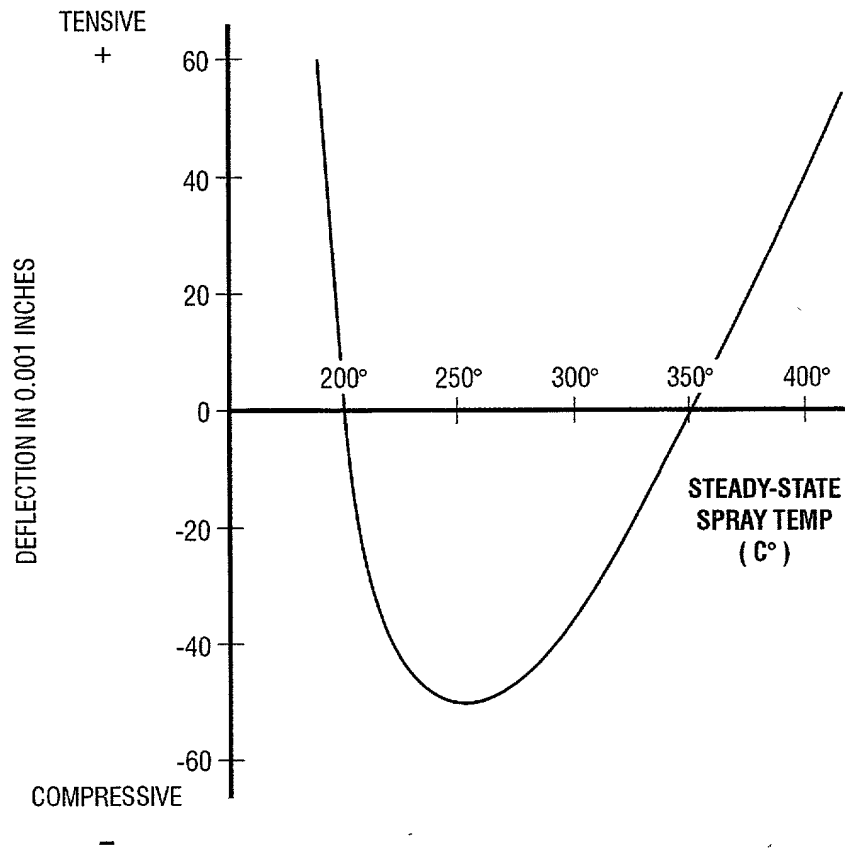
FOOTNOTES



**FIG. 17**



**FIG. 18**



**WARPAGE ( OUT OF FLATNESS ) OF SPRAYED METALLIC PLATE  
VS. STEADY STATE SPRAY TEMPERATURE**

**FIG. 19**